GrummanWorld

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A Joint Effort. *Late last year, the second E-8 aircraft for the Joint STARS program arrived at Grumman Melbourne Systems in Florida. Like the first Joint STARS aircraft, this modified 707 will serve as a prototype airborne platform.*

Data Systems Wins ATACC Competition

U.S. Navy's Space and Naval Warfare Systems Command recently awarded Grumman a $23.3 million development contract for the Advanced Tactical Air Command Central (ATACC) program.

The contract calls for the design, development and production of mobile battlefield command centers for the U.S. Marine Corps. Initial funding for the project is $4 million. However, if all options are exercised, the award could be valued at $115 million.

Grumman Data Systems will manage the ATACC program. The division will also provide systems engineering and integration including hardware installation, customizing and developing software, and systems maintenance .

"This is a very important win for us," says Data Systems President Bob Myers. "We've worked for several years with these customers and we know their needs in command and control. We'll provide this capability in the shortest possible time."

The ATACC battle management system is a spinoff of the Grumman C^{3}I workstation used by the Air Force's Pacific Headquarters in Hawaii.

All the system's equipment comes housed in a rugged 8x8x20-foot shelter. "A battle commander can use the system right on the battlefield to help plan and execute his battle forces," says Bill Bonner, ATACC engineering manager.

In the field, ATACC will generate air task orders automatically and provide decision support, communications processing, graphics and text displays, information management, and monitoring of friendly and hostile forces.

"Battle details such as the overall defense situation, enemy threat, and unit readiness will be communicated instantly to the air commander on ATACC's automated displays," says Harold LaWare, ATACC program director. "The commander, in turn, will be able to issue orders immediately over digital voice communications systems."

Each ATACC system consists of six workstations and three microprocessors. In the field, they will be powered by mobile generators. The system will function either as a stand-alone unit or be linked together by local area network and voice communication interfaces in two- or four-shelter configurations.

"A commander could use one shelter to organize and execute today's battle plans while a second unit helps gather important information about the battle plans of the following day," says Bonner. "The ATACC equipment weighs only about 9,500 pounds. Therefore, it will be easily transportable to wherever it is needed by aircraft, helicopter, truck, ship or forklift."

Grumman will manage the ATACC program from offices in Springfield, Virginia. "The company has leased a new building now under construction so that the program's specific needs can be built into the facility," says LaWare.

The building should be completed in April. About 70 engineers, computer programmers, systems analysts and technicians will be assigned to the project.

Divisions Consolidated To Cut Operating Costs

On January 17, Grumman Corporation announced the consolidation of three operating divisions to improve efficiency and reduce administrative costs.

Grumman Aerostructures Division, headquartered in Melville, Long Island, and Grumman St. Augustine Division in St. Augustine, Florida, have become units of the Aircraft Systems Division. Grumman Houston in Webster, Texas, already a unit of Aircraft Systems, will reorganize to simplify its management and administrative structure.

St. Augustine Division retains its organizational identity and cost structure. Frank Leone has been appointed vice president and general manager - St. Augustine Operations, Aircraft Systems.

In addition, Jim Reinhartsen has been appointed general manager, Houston Operations. Leone and Reinhartsen report to Tom McGrath, Aircraft Systems Division senior vice president - Product Operations.

Aerostructures also retains its identity and cost structure. Don Schlegel has been appointed vice president - Aerostructures, Aircraft Systems. He reports to Ron Peterson, executive vice president.

Grumman now employs 1,300 in St. Augustine and 450 in Houston. These changes will reduce the work force by approximately 50 jobs in St. Augustine and 25 in Houston, virtually all in management and administrative functions. The company expects that additional workload will cause employment to recover at least to current levels in both locations by the end of 1989.

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U.S.S. Leroy Grumman Christened In Louisiana

The Mississippi River recently took the place of a runway as a Grumman vessel of a different kind was launched for the first time.

At ceremonies held at the Avondale Industries shipbuilding facility in New Orleans, Louisiana, the Navy christened its newest fleet oiler ship, the U.S.S. Leroy Grumman. Christening the new ship were Grumman's three daughters, Marion Phillips, Florence Hold, and Grace Nelson.

Over 300 Navy and Avondale company officials and guests attended the christening.

Grumman's Vice Chairman of Technology, Renso Caporali, was a guest speaker. "Grummanites are pleased and proud to know that the name Grumman is not only on the rudder pedals of most of the United States Navy's carrier aircraft, but now will also be much more visible traveling the world on the transom of a Navy ship," he said.

"We must have strength at sea to survive," said Vice Admiral Peter Hekman, Jr., U.S. Navy Commander, Naval Sea Systems Command, also at the ceremony. "Today, the Leroy Grumman gains her identity and the promise of a long and distinguished life of service to the nation's defense."

Measuring 667 feet long with a beam of 97 feet, the U.S.S. Grumman is referred to as a T-AO ship. Its mission will be to transport bulk products from shore depots to combatants and support forces under way. The oilers also carry and deliver limited fleet freight, cargo, water, mail and personnel.

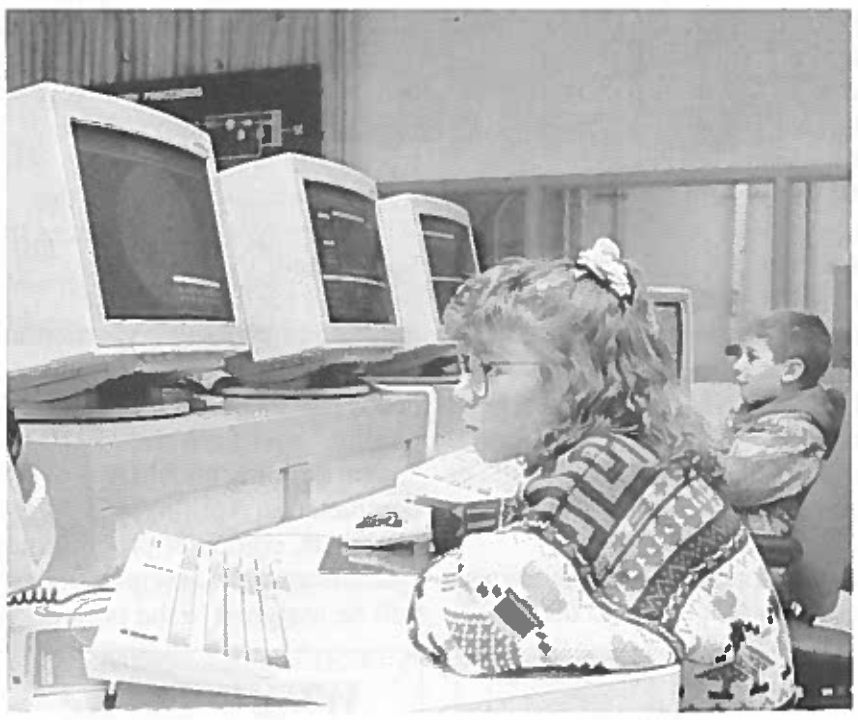
The ship can carry up to 183,500 barrels of oil in 18 cargo tanks and can simultaneously receive, store and discharge two separate grades of cargo oil. Powered by twin diesel engines, the ship can move at speeds of up to 20 knots.

Because there were three sponsors, the traditional act of cracking a champagne bottle on the new ship's bow was altered a bit. Three separate lines of string were attached to the bow of the ship on one end, strung across the water, and attached to a table set up on the platform where the three women stood.

Each equipped with an ax, the women all struck their own string at the same time. When broken, the strings released three bottles of champagne that traveled down the lines and cracked on the ship all at once.

"I just wish my father were here to share this experience with us," said Hold. "He would be very, very proud."

Grumman Goes To Sea. *Leroy Grumman's three daughters: (L to R) Marion Phillips, Grace Nelson, and Florence Hold recently christened a new Navy fleet oiler ship, the U.S.S. Leroy Grumman. Ceremonies were held at the Avondale Industries shipyard in New Orleans, Louisiana. This was the first time in Avondale's history that three rather than one person christened a ship. The women sliced separate lines which released three bottles of champagne.*



Junior Star Warriors. *Grummanites made sure there were hands-on exhibits at the BSTS open house. Here, Elizabeth and John Zembruski, the children of principal planning engineer Mike Zembruski, had their chance to try BSTS on for size.*

Seeing Where They Work

Over 100 family members of Grummanites on the Boost Surveillance and Tracking System program had a chance to see up close just what this "Star Wars" program is all about. The program invited them to an open house late last year to inspect the new BSTS Sensor Test and Integration lab.

Visitors were welcomed by Space Systems President Alex Alexandrovich and program vice president Dr. Pat Barry. Films were shown and the BSTS mockup was on display.

Grumman Begins Shipping C-17 Aircraft Tooling Fixtures

Late last year, Grumman put the first nine large fixtures onto a truck bound for Douglas Aircraft Corporation's subassembly facility in Macon, Georgia.

Grumman will deliver 10 more major fixtures and another 63 minor ones that will be used to build the aft fuselage frames for the C-17 aircraft.

Douglas needed help building tools for its big C-17 project because its own tool-making shops were overcrowded. Getting the help could have been difficult.

"The products the industry is building are larger and more complex, and the community that can build them is getting smaller," says Bill Lamberta, director of Manufacturing Engineering.

These jobs present new, easily managed opportunities to Grumman. On contracts where the Grummanites build fixtures according to blueprints they are supplied, there's little documentation to do.

They simply take the drawings and follow them. On the design and fabrication jobs, the similarity of the tools means parts can be modified quickly.

"Computer-aided design makes this easy to do, Art Deissler, deputy director, Manufacturing Engineering says. "You can do a lot more standardization."

Aircraft Systems won four such tooling contracts: three from Douglas for C-17 work, one from Pratt & Whitney for its ATF engine development program.

Grumman is awaiting another award that could put the total for all the contracts over $4 million. The work is done by Manufacturing Engineering.

These projects are easy to bid for, are awarded quickly and have a fast turnaround time, which helps Grumman retain people by filling some of the valleys in Tool Fabrication in Building 2, Lamberta says. They are also a good yardstick to measure Grumman against other companies. "And it's our feeling that it could be our entree to doing production work for these companies," he says.

It's the kind of work Grumman's been doing for 59 years, with one California-required exception for jobs companies there require.

Says Vic Smits, section head in Tool Design, "We've never had to put earthquake features on any design before."

Unit Values

The Grumman Employee Investment Plan's unit values as of November 30, 1988, compared to October 31, 1988, are:

Equity Fund
4.508 down from 4.617

Fixed Income Fund
6.333 down from 6.399

Guaranteed Income Fund
2.934 up from 2.910

Company Stock Fund
$20.81 down from $22.81

Dividends Declared

On January 19, Grumman declared a dividend of 70 cents per share on the company's $2.80 preferred stock, payable February 13 to shareholders of record at the close of business on February 3.

Grumman also declared a dividend of 25 cents per share on common stock, payable February 17 to shareholders of record at the close of business on February 7.

Several Guard Gates Closed

New schedule goes into effect January 27

After reviewing the previously announced gate closing schedule, Grumman Security has revised its operating hour schedule. The new schedule goes into effect Friday, January 27. Here are the new hours (gate identification letters are in parenthesis):

Bethpage: Building 3, Main Gate (N), open 24 hours; Building 1, Main Gate (V), Mon.-Fri., 6 a.m.-8 a.m. and 3 p.m.-5 p.m., closed Sat. and Sun.; GHQ Main Gate (B), Mon.-Fri., 5 a.m.-6 p.m., closed Sat. and Sun.; Building 2, Main Gate (T), Mon.-Fri., 6 a.m.-6 p.m., closed Sat. and Sun.; Buildings 21, 37N, 37S, 28, 114, 115, 116, Main Gate (L), Mon.-Fri., 6 a.m.-6 p.m., Sat., 6 a.m.-4 p.m., closed Sun., after hour entry by request through Building 18.; Building 105, Main Gate (R), BSTS, Rt. 107, Mon.-Fri., 6 a.m.-6 p.m., closed Sat. and Sun., after hour entry by request through Building 18; Building 12, Main Gate (W), Mon.-Fri., 6 a.m.-7 p.m., all other times on call during watchclock round;Building 24, Main Gate (Central Receiving) (K), Mon.-Fri., 6 a.m.-5 p.m., closed Sat. and Sun.; Building 30, Main Gate (C), Mon.-Fri., 6 a.m.-6 p.m., closed Sat. and Sun.; *All other gates closed.* **Exterior lobby entrances:** Building 111, 24 hours, seven days a week; Headquarters lobby, Mon.-Fri., 6 a.m.-6 p.m., closed Sat. and Sun.; Employment, Mon.-Fri., 7 a.m.-4:30 p.m., closed Sat. and Sun., Building 30, Mon.-Fri., 7 a.m.-5 p.m., closed Sat. and Sun.

Calverton: Main Gate (Grumman Boulevard), open 24 hours, seven days a week; North gate (Route 25), Mon.-Fri., 6 a.m.-8 a.m. and 3 p.m.-5 p.m., closed Sat. and Sun.; Buildings 8 and 78, Main Gate, Mon.-Sat., 6 a.m.-6 p.m., closed Sun.; *Southeast Gate closed.*

Great River: Main Gate, (Sunrise Highway), open 24 hours, seven days a week; Rear Gate, (Wheeler Road Gate), Mon.-Fri., 5:30 a.m.-8 a.m. and 3:30 p.m.-4:30 p.m., closed Sat. and Sun.; *Main Gate, (Connetquot Avenue), closed.*

Melville: Building 121, Main Gate, Mon.-Fri., 5 a.m.-7 p.m., Sat., 6 a.m.-4 p.m., *East Gate closed;* Building 106, Main Gate, Mon.-Fri., 5 a.m.-7 p.m., Sat., 5 a.m.-4 p.m., *West Gate Closed;* Building 110, Mon.-Fri., 5:45 a.m.-7:10 p.m., Sat. open 5:45 a.m.-4 p.m.

Holtsville: Main Gate, open 24 hours; Lobby, Mon.-Fri., 6 a.m.-4 p.m.; Rear entrance, 24 hour coverage seven days a week.

Gates Closed Permanently: Building 2, South Gate (U); Hazel Street (Q); Building 15 (M); Building 20 (K); New Credit Union; Building 35 (D).

Matching Gifts Policy Changed; No Effect On 1988 Donations

As of January 1, Grumman's Corporate Matching Gift Program will match an employees gift to an eligible school dollar for dollar. Since 1984 the Grumman had sent $2 to the school for every $1 a Grummanites donated. Last year the company had donated over $221,000 to schools.

"Other aerospace companies that have these plans match donations at a one-for-one rate. Fortunately, Grumman has been able to make contributions at twice that rate over the past several years,"says Grumman Vice President and Secretary Bob Bradshaw. "We now must return to what is the industry standard."

The plan's operation is simple. You can donate from $1 to $1,000 to any two- or four-year, regionally accredited, degree-granting institution per year. Contributions to graduate schools can be matched at the discretion of the Contributions Committee. Foreign schools may also qualify. You can also give to a number of schools, but Grumman will match only up to $10,000.

All you need do is submit evidence of your donation to the Matching Gifts Program: Public Affairs, mail stop A12-GHQ. Your proof of donation can be an official receipt or an acknowledging letter from the school. Be sure that your proof shows the date and amount of the contribution,plus your name, employee number, building number, department and phone extension. Requests are processed at the end of each quarter. When that's done, Grumman will send an equivalent donation to the school.

If you made a donation to a school last year, it's not too late to get Grumman to match it. Submit your of donation before the end of March. Moreover, any donations made last year will still be matched at the two-for-one rate.

Grumman Asks To Participate In LILCO, Gov't Negotiations

Grumman has announced it intends to participate in the settlement process between the Long Island Lighting Company and local government over the opening of the Shoreham nuclear power generating plant.

To do so, Grumman has filed a motion with the Federal District Court for the Eastern District of New York to intervene in the Suffolk County lawsuit against LILCO. That suit alleges that LILCO has received rate increases by improper means.

Grumman, with more than 20,000 employees on Long Island, wants to make sure that the final settlement does not adversely affect the local economy.

"Our own annual electric bill is now in excess of $30 million, " says Grumman Chairman John O'Brien. "But I am even more concerned about the cost of increased electric rates to our hundreds of suppliers and thousands of employees. The aerospace industry is highly competitive today, and growing utility costs can quickly make it impossible to bring new defense dollars to Long Island.

"In no way should this be interpreted as a move against LILCO or any other participant in the matter," he says. "We believe we must be at the table to represent our interests and those of the local aerospace industry.

"We are also interested in preserving the plant as a local asset. There is no reason for us to abandon the billions of dollars that have been invested in Shoreham," he concludes.

GQ Solution Being Used For ATACC Quick Start

When the ATACC contract was awarded to Data Systems, it represented more than the expected challenge of building a highly automated command center. A Grumman Quality team in the division had just come up with a way to simplify and speed the way budgets are created for new programs. The ATACC program was the test-bed.

Did the idea work? "From my standpoint, we are way ahead compared to previous contracts," says Gary Woghin, Data Systems' director of Planning, Control and Budgets and a member of the GQ team.

Team leader Phil Gandolfo, the division's assistant controller, says things had to change. Data Systems had a budget process that couldn't respond quickly to the start of a new program or an engineering change in an existing one. Detailed, firm budgets weren't issued until months after the start of a project.

The GQ team attacked the problem in July.

After studying what happened on past contracts and surveying those affected by the budget system, they decided on a plan that would put temporary budgets in place and streamline the budget process. Data Systems' Steering Committee accepted their solution on December 8. It was perfect timing. The ATACC award was announced just a week later.

The big changes were made in some of the documents that allow money to be spent paying salaries and buying equipment needed for a given contract.

"We simplified and revised the Contract Work Authorization," Gandolfo explains. "Before, it was almost a complete budget. Now it's used just to authorize funds.

"We also revised the Project Work Authorization into three types," he says. "The Planning PWA fills the budget gap after we submitted our 'Best and Final Offer' to the customer. It helps keep the organizational elements of a program intact."

The second authorization is the one that lets a program get rolling. "When ATACC was awarded on Thursday, the PWA was released on Friday," says Gandolfo. It worked perfectly the first time it was tried. It funds the program for up to 120 days. By that time, the final, formal work authorization has been written and approved.

During their fact-finding, the team also found there were training problems. "People just didn't understand the budget process," says Gandolfo, so his team proposed some new training programs.

Now Data Systems must publish the final procedural changes and start the training programs. Gandolfo will be studying the way the new procedures affect the budgeting process to be sure the changes are on target. But he's pretty confident, from what he's seen on ATACC. "There's a sense that the whole team got a better start on this job."

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Federal Regulations Affect EIP In 1989; Revisions In Hardship Withdrawals Made

Federal regulations have once again spurred changes in the Grumman Employee Investment Plan. These changes involve hardship withdrawals from your deferred compensation option (DCO) fund; and percentage limitations on EIP contributions.

The federal government recently released final regulations for 401K plans, such as the DCO. As a result of these new regulations, more stringent requirements are now imposed on hardship withdrawals as of January 1, 1989.

With DCO, you deposit your money into an EIP fund via payroll deduction before it is taxed. You are not allowed to withdraw this money until you reach age 59 1/2. However, hardship withdrawals are permitted in four cases: the purchase of a primary residence, college tuition payments and — new this year — the prevention of eviction from your principal residence or foreclosure on the mortgage of your principal residence. The U.S. government states that withdrawals for post-high school education is limited to tuition only for the next semester or quarter. This doesn't include room, board or books. The tuition can be for yourself, your spouse or your dependents.

In general, you must demonstrate that you have no other financial resources available prior to making a hardship withdrawal request. The EIP office — (516) 575-7250 — has special withdrawal forms.

In addition, if you make a hardship withdrawal, you will be suspended from the EIP for one year.

Another twist that you should be aware of is that as of January 1, 1989, you can't withdraw earnings accrued from your DCO contributions. However, earnings credited to your DCO account, generally as of December 31, 1988, may to be included in a hardship withdrawal.

Remember that if you make a hardship withdrawal, you must pay regular income tax on that money, plus a 10 percent penalty tax. The penalty tax is a result of the Tax Reform Act of 1986.

Another federal regulation concerns the amount of your regular paycheck that you may contribute to the EIP. Federal regulations require that Grumman conduct "non-discrimination" tests for both deferred (pretax) and regular (after-tax) EIP contributions. Historically, the results of these tests have limited the percentage that certain employees may contribute to the DCO.

In 1989, employees whose total 1988 Grumman compensation was in excess of $52,235 will be limited to a seven percent contribution to the DCO portion of the Plan, at least initially. Those employees whose total annual Grumman compensation in 1988 was $52,235 or less may contribute up to 14 percent of their base compensation to the DCO. In other words, the maximum dollar amount that any employee — regardless of base compensation — may deduct via payroll deduction is $7,300 in any plan year.

"While it is difficult to determine at this point what impact the two 'non-discrimination' tests will have on these contribution percentage limits during the year, both DCO and regular plan percentage limits may be subject to revision in 1989," says Mike DeVito, manager of Pension and Investment plans.

If you have any questions, call the EIP office, (516) 575-7250.

Investment Plan Announces Other Changes For 1989

Aside from new federal regulations, there have been other changes made to the Grumman Employee Investment Plan as of January 1, 1989.

For the first two quarters of 1989 (January through June), money on deposit in the Guaranteed Income Fund will earn an annualized yield of 10.25 percent. "Because of volatility of the financial markets at this time, the rate will be adjusted for the second half of 1989 and will be announced in June," says Mike DeVito, manager of Grumman Pension and Employee Investment plans.

Another area that has been changed is the disposition of accounts after termination of employment. Today, EIP members who terminate their employment with Grumman may elect to keep their accounts open until reaching age 70 1/2. They may transfer contributions from one account to another once every six months, or make up to two withdrawals within 18 months. They may also elect to close out their accounts at any time.

Beginning this year, those who become members after January 1, 1989, and who later leave Grumman for any reason other than retirement, will only be able to request a distribution or transfer of funds during the first two years immediately following termination. After that time, no distributions — other than death payments — will be made until the EIP member reaches age 65. In the case of deferred moneys, the member is permitted to withdraw Deferred Compensation Option money at the age of 59 1/2. "No further fund transfers will be permitted," says DeVito. "The fund is frozen until they reach age 65."

However, participants who became EIP members prior to January 1, 1989, and who keep their accounts open will continue to be permitted to make fund transfers and request distributions after termination within current plan limits.

Pension Plan Rules Change In Regard To Vesting Period

On January 1, three significant changes took effect in the Grumman Corporation Pension Plan. The changes all relate to the new vesting period for the Pension Plan, which has been lowered to five years in accordance with Federal law.

Grummanites in most divisions are enrolled in this plan when they begin working for the company. But previously, only those people with 10 years of continuous service were vested. Vesting means you are entitled to receive benefits when you are pension eligible. "In other words, even if you leave the company before retirement age, you will receive a pension when you reach age 65, " says Mike DeVito, manager of the Grumman Pension Plan.

Along with the changed vesting period, plan members become eligible at five years for pre-retirement survivor annuity. If a Pension Plan member dies while still working for Grumman, his or her spouse is entitled to a pension benefit. If the member has no spouse or the spouse dies while receiving payments, the member's dependent children, if any, will share the benefit during their dependency. Previously, the member had to have 10 years continuous service to receive such coverage.

A different type of pre-retirement survivor annuity is provided for terminated vested members with less than 20 years active service. Effective January 1, Plan members with at least five years continuous service are covered — the limit for this, too, used to be 10 years.
Under this provision, spouses are entitled to a pension benefit if they were married to a terminated pension member who diedbefore age 60. The benefit is payable when members would have reached age 60. Coverage is provided automatically, but members must pay for it through a reduction in their benefit.

Different rules apply for the plans covering other parts of Grumman, including the Allied Division's Pension Fund, and capital accumulation plans for Grummanites in the St. Augustine and Technical Services Divisions, and Electronics Systems' Salisbury Operations and Tachonics Corporation.

If you have questions about these changes in the Grumman Pension Plan, call the Pension Plan office, (516) 575-6282.

A Hero Visits To Say Thanks. *U.S. Navy Capt. Rick Hauck, commander of the Space Shuttle Discovery , recently toured the Bethpage and Calverton facilities to share some of his space travel experiences and to thank Grummanites for their contributions to the space program. After spending some time with these folks in Building 5, Hauck gave a slide presentation in the Headquarters auditorium. The slide show included photos of Discovery's crew aboard the shuttle as well as pictures taken from the spacecraft.*

Watch Recipients Weren't Just Faces In The Crowd

JERICHO, N.Y. — The 1988 25-year luncheon was almost cozy, compared to past years when several thousand active and retired Grummanites pushed the walls to their limits. The December 6 affair at the Crest Hollow Country Club was exclusively for those 905 Grummanites who reached 25 years of service with the company in 1988. Grumman Chairman John O'Brien called them "LM-Boomers."

O'Brien praised these anniversarians, saying their 25-year watch was "the official symbol of someone who's been around forever. It gives you added stature and credibility. Take advantage of that.

"Your contribution to Grumman goes way beyond the job you're paid to do," he said. "You guide the next generation of Grummanites as they create the Grumman of tomorrow."

O'Brien recalled the programs they had worked on during their careers: the lunar module that landed men on the moon; the A-6, E-2, EA-6, EF-111, KA-6D and F-14 aircraft ; Pearson yachts, and solar panels, the Flxible bus and Gulfstream.

Beyond the walls of Grumman, the turmoil of Vietnam and several assassinations changed the way the nation looked at itself. "But through it all, you worked it out. Other things in your life changed, but you kept coming to Grumman day after day, for 25 years," O'Brien said.

He urged veteran Grummanites never to become complacent. O'Brien recalled a letter a Grummanite once wrote him. The writer said his boss told him to hang on until he had 25 years with the company; then he could just coast. "I think we all know that Grumman can't afford any more coasters. We've all got to pull our weight."

For those who don't feel challenged or happy in their jobs anymore, O'Brien urged further education, a search for new job opportunities, a fresh look at their own hopes and aspirations. "So even if you're not younger than springtime anymore, you're not old enough to rest our your laurels," he said.

O'Brien asked how many attendees had planned to make Grumman a career in 1963. It wasn't hard to find people who had no plans back then to stay 25 years.

"I only came here for the summer," said Linda Kuttner. She started working in Building 5 in Bethpage as a technical aide in Research. For the last 19 years she's been an engineer on the E-2 program. Looking back, she said, "I couldn't think of working for another company."

Carol LaNier, now an executive secretary, had it all planned in 1963: "I was going to work at Grumman for a few years. Then I was going to buy a car and drive to California."

When Joe Darty joined Grumman as a custodian 25 years ago, he didn't give much thought to where he'd be in 1988. Today he's a foreman. "Things worked out pretty well for me."

But for Bob Flanagan of F-14 Contracts, the 25-year luncheon was a long-awaited milestone along a chosen road. "When I came here I had full intention of making a career at Grumman," he said. "It's been a good 25 years."

Personal Thanks. *Charlie Eich receives his 25-year watch from Grumman Chairman John O'Brien. He was one of 905 recipients at the 1988 luncheon.*

You Have 107 Days, 14 Nights To Donate Blood In 1989

Every day of the year, 700 pints of blood are needed by the hospitals and medical centers of populous Long Island. As the Island's largest private employer, about one-tenth of that requirement has been met by the Grumman Blood Donor Program.

Meeting the need in 1989 will be tougher than ever because a lot of veteran donors have retired in the past few years. That hasn't been matched with an influx of new donors.

"We will have to persuade more people to participate this year," says Ray Nightingale, vice president - Electronics Systems Division and this year's program chairman. "There are still a lot of people registered in the blood program who never give blood. We want to make sure they donate this year.

"We also want to remind Grummanites that if you've never donated blood before, you don't have to preregister — just show up at one of the drives."

Anyone in good health between the ages of 17 and 75, weighing at least 110 pounds, may donate blood. Pregnant women cannot donate, nor can people who have had hepatitis.

There is no risk of infection from donating blood, because a separate needle and harness is used for each donor, then discarded. Donating only takes about an hour.

Last year, 11,600 pints of blood were donated by Grummanites. This year, blood drives will be held at about 30 buildings on Long Island, most of them twice . In all, there will be 107 daytime drives and 14 during the night.

Working with Nightingale on the '89 Blood Program are: director Phil Gill, of Great River Operations; Mary Scioscia, Maryjane Pecoraro, and Joan Solomita, of Electronics Systems Accounting; Howard Saltzman, of Component Microwave Products; Bud Mitzman, Great River Operations; and Joe Tinto, Test Equipment Products.

Many off-Long Island sites sponsor blood drives, too, or schedule "Grumman Days" at their local blood centers. Contact your plant nurse or administrator for more details.

Team '89. *Among the members of this year's Blood Program team are: Electronics Systems Vice President Ray Nightingale, chairman; Maryjane Pecoraro; Mary Scioscia; Barbara Roland (Calverton coordinator); and Phil Gill, director. Missing from photo: Bud Mitzman, Howard Saltzman, Joan Solomita, and Joe Tinto. (Photo by Harry Prodromides)*

Where And When To Give

Jan. 30 - ("O" drive) - GHQ
9 a.m. - 2:30 p.m.
Jan. 31 - GHQ - 9 a.m.-2:30 p.m.
Feb. 3 - Bldg. 110
9 a.m.-2:30p.m.
Feb. 8 - Bldg. 40
9 a.m.-2:30 p.m.
Feb. 15 - Bldg. 30
9 a.m.-2:30 p.m.
Feb. 16 - Bldg. 35
9 a.m.-2:30 p.m.
Feb. 17 - Bldg. 112
9 a.m.-2:30 p.m.
Feb. 21 - Bldg. 106
9 a.m.-2:30 p.m.
Feb. 23 - Bldg. 235
7:30 a.m.-1 p.m.
Feb. 28 - Bldg. 3
8:30 a.m.-2 p.m.
5 p.m. - 10:30 p.m.

A New Wave In Blood Donations

Consider giving blood through Pheresis. This is a new, safe procedure wherein a blood separator automatically removes platelets from the blood you are donating and then returns the blood to you in one process. According to the Blood Program, this process eliminates many side effects that people experience when giving whole blood. Interested Grummanites should call 575-8920.

And if you or any of your relatives or friends give blood at a drive outside Grumman and would like to credit the donation to the Grumman Blood Program, it's easy. Just tell the person registering you to credit your donation to Grumman's account number: 3863.

Olson Offering Kurbmaster With The John Deere Chassis

STURGIS, Michigan — Grumman Olson has developed a Kurbmaster truck body to fit on a John Deere chassis.

Grumman Olson has already built 54 of the new trucks, four of which were used for tests. The trucks are for Continental Baking, which already is a major Grumman customer.

"We build our trucks on the chassis of the customer's choice," says Ed Mackay, vice president, Automotive Engineering. "Continental accounts for over 500 units a year and has a 100 percent Grumman Olson fleet. Its current trucks have Ford chassis."

Before John Deere introduced its chassis, Continental bought Ford chassis, then re-engined them with Cummins diesels. The John Deere chassis already had Cummins engines, eliminating that step.

Grumman built one additional truck as a prototype for another food concern, Campbell-Taggart Corporation. But full scale production of these new Kurbmasters is not expected to begin until later this year. This lot involves just one size Kurbmaster body (15 feet long, 96 inches wide) mated to a particular chassis.

John Deere recently announced the sale of its stripped-chassis business to Oshkosh Truck. Deere had been producing chassis for the motorhome industry and more recently, for the commercial truck business. Oshkosh produces trucks mainly for military use.

The design work on the new truck began last spring. Grummanites advised Deere's engineers on the proper position of driver controls. These come with the chassis when it arrives at a Grumman Olson plant.

"Remember, this was John Deere's first chassis for the delivery industry, and we've had a lot of experience in the business," explains Mackay. Otherwise, he says the design effort was no different than any other new chassis.

"It looks like a very typical Kurbmaster," he says. "There's no door on the left side — usual for bakery trucks. That way, the driver exits to the curb rather than into traffic."

Both Grumman Olson and John Deere use computer-aided design systems, though different brands. Thanks to translation software, they were able to trade data tapes to work on designs.

"We've only been able to do that with two chassis to date — Ford was the other one," says Mackay. "It really makes for a good marriage of body and chassis."

The four test vehicles underwent a workout at the Test Research Center, Marysville, Ohio. The test regimin covers their brakes, acceleration, and cooling systems, and overall durability. These tests are necessary to meet Federal motor vehicle safety requirements, as well as Grumman's own product standards.

In addition, barrier tests were conducted at the center. These are better known as crash tests — a vehicle is run into a fixed barrier for frontal tests. In addition, a moving barrier is run into the stationary unit for side and rear impact tests.

Simultaneously, Grumman Olson tested and introduced a new three-point driver's seat belt and a removable "jump seat" for fleet supervisors. The latter also has the three-point belt, the first of its kind in the industry.

Until now, jump seats have had lap belts — which satisfied mandatory seat belt laws. Grumman Olson has filed a patent application for its new three-point seat and driver restraint system.

Ready For Color. *A new Grumman-John Deere Kurbmaster awaits its paint job at the Sturgis plant. Grumman Olson has built over 50 of the new trucks for Continental Baking, a major fleet owner. Four test vehicles underwent safety checks and tests of their major systems.*

Fathers Of Invention. *Grumman Vice Chairman - Technology Renso Caporali (L) and Vice Chairman - Development Dan Huebner (R) congratulate Richard Wimberly (2nd from L) and Charles Schmitz. The two Grummanites from the Irvine, California, facility were recently named Inventors of the Year.*

Schmitz, Wimberly Named 1988 Inventors Of The Year

Charles Schmitz and Richard Wimberly were recently named 1988 Inventors of the Year.

The two men work for the Space Systems Division's Irvine, California, facility. They patented a High Density Multilayered Integrated Circuit Package that will be used in the Boost Surveillance and Tracking System (BSTS) satellite. BSTS is a key part of the Strategic Defense Initiative that will detect and track intercontinental ballistic missiles upon launch.

Schmitz is director of Production Operations for the Irvine facility, and Wimberly, a design engineer.

"The High Density Multilayered Integrated Circuit Package will make up the part of the focal plane assembly, which will act as the 'eyeball' of BSTS," says Wimberly. "It will be located within the actual sensor, gathering and conditioning the infrared signals detected from earth."

The device, U.S. Patent No. 4659931, is the fourth in a series of patented inventions that incorporate Grumman-developed "Z Technology." This technology uses a third dimension — the Z axis — to interconnect many integrated circuits in an extremely small space: about 300 large-scale integrated circuits can occupy a cubic inch. Using conventional technology, that number of such circuits would exceed 10 cubic inches in volume.

"The extremely high density enables us to maximize the amount of signal processing done on the focal plane," says Schmitz. "The circuits are much less susceptible to noise — unwanted information. In addition, they will be able to operate at lower temperature, which will require less power. Those are important considerations given the mission of BSTS."

This is Wimberly's first patent, and was Schmitz's fourth. He has since been issued a fifth patent for another aspect of the electronic package. This is also the second year in a row Schmitz has been an Inventor of the Year. His earlier winning invention was a more advanced version of the circuit concept that will go into a later version of the BSTS satellite.

Besides BSTS, the technology could have benefits for higher speed computers, electro-optic devices, and other electronics systems, in both the military and commercial arenas.

Take The Pay Or The Day

Unused paid absence allowance cards will be distributed during the week of January 30. All cards must be submitted to Payroll by Friday, February 17.

If you elect payment rather than carrying over your 1988 unused paid absence days as 1989 personal holidays, you'll see the additional payment in your March 2 check.

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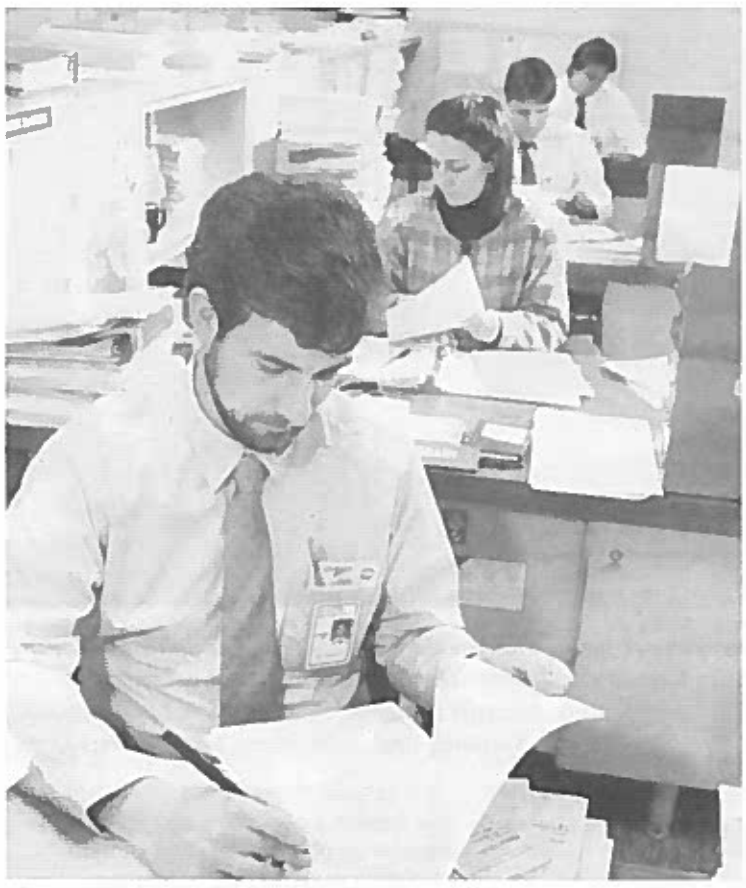


Checking The Facts. *In the F-14 Configuration Data Management group, John Grogan (L) reviews seller data submittals for contract compliance while (above) Bill Paulik reviews aircraft data items. In the latter, engineering and manufacturing data must be compared for a proper match. The department has drastically cut the distribution of such documents. (Photos by Rich Breunig)*

Snowed By Paperwork? A GQ Team Offers Help

Paperwork jangles the nerves of virtually everybody who works in an office. It often seems there is little you can do to stem the flow of memos and documents into your "in" box.

Now, a Grumman Quality (GQ) action team in Aircraft Systems has come up with a way to slash the page count of periodic status reports — common in many areas of Grumman. In a pilot project, the team cut by 59 percent the page count of reports generated by four F-14 program groups. The idea is expected to become an Aircraft Systems Division policy, and may be used throughout the company.

"Just about every office group in Aircraft Systems generates status reports," says Dan Brady, director of Business Management for the Product Operations department and a member of the action team. "While Grumman has had paper purges from time to time, paperwork doesn't get the same critical focus as other business issues."

Brady points out that even a 10 percent reduction in paperwork is significant. Studies indicate office workers spend close to 40 percent of their time creating, typing, reproducing, delivering, reading, filing, and sorting paperwork. Multiply that by the number of office personnel, and you come up with a potential for a hefty productivity improvement.

"That's not cold cash, but time people can spend on more important tasks," says Brady.

The Grumman Quality action team divided status reports into monthly status, budget/manpower/financial, shortage, technical, and field service reports. The team chose budget reports for its pilot study and zeroed in on F-14 Budgets, Planning and Controls; Engineering; Integrated Logistics Support; and Product Operations.

The team came up with nine simple rules people should ask themselves when first creating reports.

- Is the document necessary? Ask your customers — the people you send the report to.
- Does the information your report provides justify the cost of sending it out?
- Can your report be shortened?
- Does the data satisfy a contractual requirement?
- Is it typed or produced on a computer system? Can it be?
- Is the frequency of this report required?
- Can there be fewer sign-offs?
- Can the report be printed back-to-back?

Not producing a report in the first place yields the greatest cost savings. It eliminates the time it takes to create, type, reproduce, and read the document.

The four F-14 departments put out 61 periodic budget/manpower/financial reports, mostly monthly. Applying the nine-step formula, six of those were eliminated altogether; the rest cut back. That translated to a 59 percent reduction in pages.

The group conducted a separate pilot study in F-14 Configuration Data Management, due to the peculiar nature of its paperwork.

Brady expects the method to become formal policy, and some new rules to result, such as decreasing weekly status reports to biweekly. Early this year, the team hopes to streamline budget reports on all Grumman aircraft programs. Teams from these programs will then determine which report categories to trim next, and will closely monitor their progress.

The project is expected to have some spinoffs. Team leader Bill Waters is looking at some related materials problems. Another team member, Mark DiFilippo, is studying ways to reduce computer reports. In addition to wasting paper, such documents are a waste of computing resources.

"Defense is a tough industry to be in right now," says Brady. "Companies have to find ways to save. This solution is simple — there is no investment required and little effort. And it works."

Action Team Members

Team Leader: Bill Waters, assistant to director, Material Operations.

Members: Carl Amato, deputy director, Integrated Logistics Support; Dan Brady, director, Product Operations Business Management; Leslie Brower, manager of administration, Engineering; Paul Colon, director, Configuration Data Management; Mark DiFilippo, manager, Product Operations Systems; Andrew Gelderman, director, Quality Assurance.

Facilitators: Dan Anderson, ODI; Jim Erickson, staff assistant to general manager, Bethpage Ops.

A Well-Documented Success

Mike Tagliaferro points to two 18 x 24 inch cartons stacked in a corner of his office.

"That's just one report we get from a vendor," says Tagliaferro, manager of Configuration Data Management for the F-14 program. "Before, 17 different people wanted copies of it. Now, we send it to four.

"We have cut the distribution of 50 other reports like it, and only a handful of people have called to request copies. That means a lot of paper was sitting unread in people's offices — until it was placed in the salvage bin."

Like its counterparts on the other Grumman aircraft programs, paperwork is this group's job. It must keep drawings, records, and other information concerning every part of this highly complex aircraft, including computer software. Furthermore, there are subtle differences between every plane that comes off the assembly line, and accurate information must be available on them all.

"Our paperwork has increased significantly over the past two years due to the F-14D full scale development program," says Tagliaferro. "We were already looking for solutions when we were asked to participate in the GQ pilot program."

The documents this department keeps are often mandated by the customer. Unlike some of the others in the pilot program, there weren't many reports that could be eliminated altogether. But Configuration Data Management has cut back drastically on distribution and frequency. It projects a savings of five million reproduced pages per year, out of an average of eight million.

"Our analysis didn't even take into account the floor space savings," says Tagliaferro. "Paperwork takes up a lot of expensive real estate."

Five Grummanites Loan Expertise To United Way

"When you've been blessed with good health and a good job, you really feel the responsibility to help make someone else's life a little better, " says John Culleton, a technical advisor in Aircraft Systems.

Culleton was one of five Grummanites who spent three months last year as United Way loaned executives.

The other Grummanites participating in the program were: Renee Cox, an employment specialist in Corporate Services; Alan Stalb, a program manager in Aircraft Systems; John Ayers, a program director in Data Systems; and John Arnzen, director of Procurement for Electronics Systems.

As part of the program, the five combined drove more than 30,000 miles to Long Island companies. Their main objectives: to encourage firms to join the United Way, then train them.

"We get the message out about the United Way," says Cox. "It's our job to convince employers that the United Way deserves the support of their company and its employees."

Once the chief executive officers of the companies agree to hold a drive, the loaned executives work with the company representatives to get the drives off the ground. This may require speaking to the employees directly, helping to run fund raising events such as cake sales, or coaching the representatives on how to approach other employees for donations.

The loaned executives get a week of intensive training before they venture into the community. They learn about the United Way and the agencies it supports, and its role in the community. They also learn to set goals and manage their time.

In addition, representatives from IBM taught the loaned executives some of the same selling techniques used to train their own salesmen.

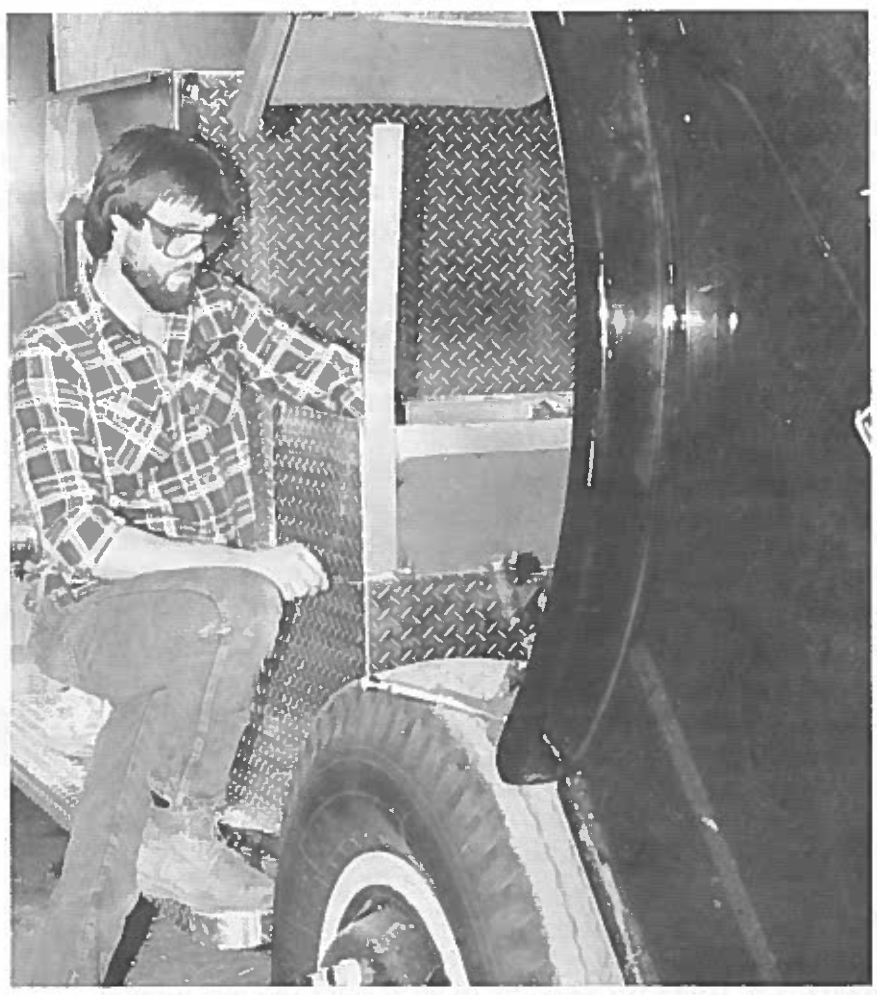
"Most of what a loaned executive does is sell," says Janet Pierce, executive vice president, United Way of Long Island. "They sell the United Way."

Culleton says the training was one of the biggest advantages to being a loaned executive. "It has been a tremendous experience, " he says. "Learning to speak to different crowds each day has given me a lot more confidence in myself. Anyone working in the business world would benefit from the training we received."

Perhaps the most memorable part of the training, however, was when the loaned executives toured some of the agencies that receive United Way funds.

"When you see how dedicated the volunteers in the community are, you want to join in and help as well," says Culleton.

They Gave Their Time. *Five Grummanites recently finished up three months as 1988 United Way loaned executives. They are: (L to R) John Arnzen, Electronics Systems; Alan Stalb, Aircraft Systems; Renee Cox, Corporate Services; John Culleton, Aircraft Systems; and John Ayers, (not shown) Data Systems.*



The Truck Stops Here. *Grummanite Michael Cline installs a control panel gauge cover on a "B" body front-mount fire pumper. Cline works at the Roanoke, Virginia, facility of Grumman Emergency Products.*

Personals

Our family wishes to express our thanks to my friends, co-workers and ESO for the flowers, mass cards, support and sympathy during the recent loss of my mother. **Joan and William Minicozzi**

My family and I wish to extend our sincere gratitude to all my friends, co-workers, ESO and EA-6B Engineering for their kind expressions ofsympathy and prayers during the recent loss of my father.**John F. Geisler**

I would like to thank all my friends in Building 1, co-workers and ESO for all the kindness and expressions of sympathy during the recent loss of my husband Eugene. **Merial Coley and Family**

James Jr. and the whole family would like to thank ESO and fellow friends of Jim's for their flowers, sympathy cards and support shown on Jim's sudden death. He'll be missed by all. **Dorothy Albertson**

My family and I would like to thank my co-workers, friends and ESO for their kind wishes and sympathy upon the recent loss of my father. **Thomas A. McGivney and Family**

I wish to thank ESO and fellow employees for their kind expressions of concern, flowers and cards during my recent illness. **Frances Caligiuri**

My family and I wish to thank my friends, co-workers and ESO for their sympathy, prayers and support shown to us during the recent loss of my dad Angelo. **Anthony DiDio**

My family and I wish to thank our friends, co-workers and ESO for their kindness, sympathy and support during the recent loss of my mother. **Beatrice Mazzara**

My family and I wish to thank our friends, co-workers and ESO for the beautiful flowers, cards and concern during the recent loss of my father Ernie. **Ray Hoene and Family**

My family and I wish to thank my friends, co-workers and ESO for their sympathy, prayers, and beautiful flowers sent to us during the recent loss of my mother Catherine. **Carmine J. Chiusano**

My family and I wish to thank friends, co-workers and ESO for their concern after my recent hip replacement. Then for the concern, many prayers, sympathy, mass cards and donations to the Heart Fund, Cancer Society and Sight Association upon the recent loss of our wife and mother. **Joe LaMarco and Family**

I would like to thank ESO and my fellow co-workers for their support and sympathy during the recent passing of my mother Mrs. Jane Jasey. **Charles J. Bennett Jr. and Family**

My husband and I want to thank all our friends, co-workers and ESO for their sympathy, prayers and support shown to us during the recent loss of my beloved sister Catherine Chiusano. **Nelson and Lucy Giordano**

I would like to thank my friends, co-workers and ESO for their support and expressions of sympathy in the loss of my mother Sherry Owens. **Kathy DePace**

My family and I wish to sincerely thank all our friends, co-workers in Building 2 and ESO for their kind wishes and sympathy and especially for the generous donation made to the East Neck Nursing Center in memory of my mother. **Rita Hafner**

Many thanks to the nice folks at Grumman for their kind thoughts and words following the recent loss of my dad. **Ed T. Barron**

My family and I wish to thank my co-workers in Building 66, friends in Bethpage and the ESO for their sympathy, prayers and support during the recent loss of my wife Lois. **Hans Borstell**

My family and I wish to sincerely thank our friends, co-workers at Grumman and ESO for their kind expressions of sympathy given to my family upon the death of our father John Mauceri Sr. **Mary Mauceri and Pauline Risevlvato and Family**

The kindness and support offered to me and my family during the recent loss of my father and my mother's subsequent illness were unparalled. Many thanks to the ESO and the whole Grumman family. Special thanks to Building 47 and Melbourne Systems for extraordinaruy aid and understanding. **Linda G. Jensen**

My family and I would like to thank our friends at Grumman and ESO for their kind expressions of sympathy during the recent loss of my mother. **Henry C. Koenigsamen**

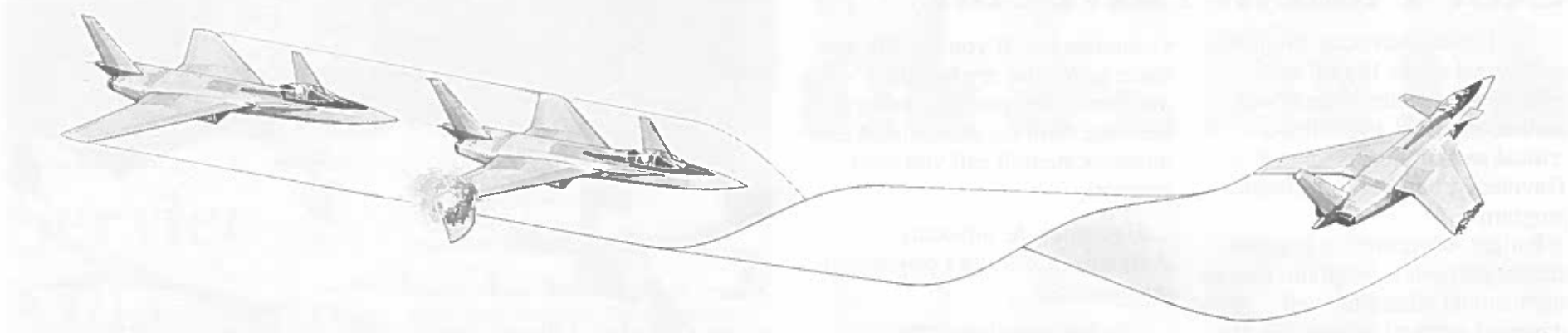
My family and I wish to thank my co-workers for their kind expressions of sympathy and concern given to my family and I during the loss of my mother. **Peter Maloy**

My family and I wish to express our appreciation to ESO and all our co-workers for their prayers, cards, flowers, and most of all support during the recent loss of my husband James. **Carmela Maskulyak and Family**

My family and I would like to extend our sincerest thanks to all our Grumman friends for your support and sympathy during the recent loss of our father William Fehrs Jr. Your efforts have provided a deeply appreciated measure of comfort. **William L. Fehrs**

My family and I wish to thank our friends, co-workers and ESO for their prayers, sympathy and support during the recent loss of my wife Agnes. **Al McDonald and Family**

Coming Soon: Planes That Fix Themselves



A Do-It-Yourself Aircraft. *Grumman is working with the Air Force on a project that would allow aircraft control surfaces to take over for each other if damaged or destroyed. To study this technology, Grumman is using a previously designed conceptual aircraft. (rendering by Bob Whitehead)*

Wouldn't it be helpful if when you broke a leg, your hands could walk for you?

The Air Force is looking for a way to allow aircraft control surfaces to take over for each other when one or more are damaged or destroyed.

Grumman Aircraft Systems is working with the Air Force Flight Dynamics Laboratory at Wright Patterson Air Force Base, Dayton, Ohio, to develop an automatic self-repairing flight control system (SRFCS) that will keep battle-damaged aircraft flying.

If a rudder, flap, aileron, canard, or other control surface fails, another one will be commanded to take over. This self-repairing technology will be built into future aircraft starting at the drawing board.

"An engineer will design control surfaces to have more than one job," says Warren Weinstein, project engineer of Control Reconfigurable Combat studies at Grumman. "This sort of back-up system will increase operational readiness and reduce the loss of airplanes."

The Flight Control Engineering Department at Grumman has been an industry leader in this field, beginning with studies for the Naval Air Development Center and the Air Force Flight Dynamics Laboratory in the 1970s.

Since 1985, the Air Force has awarded Grumman over a million dollars to demonstrate and evaluate flight control reconfiguration concepts.

Grumman has been studying aspects of advanced aircraft designs, including hardware, wiring and computer software. In so doing, the company hopes to determine how self-repairing technology might reduce the cost and complexity of future aircraft.

"One of our goals is to eliminate some of the duplication of flight control equipment," says Weinstein.

"A key factor in the success of this new technology has been the capability to detect and isolate flight control equipment failures and damage during a combat mission," says Weinstein, "and then be able to instantly stabilize and fly the aircraft. The self-repairing concept is an expansion of that technology."

Grumman is studying self-repair in a conceptual fighter aircraft previously designed by Grumman and wind tunnel tested at NASA/Langley. Originally, the design called for carefully selected locations for control surface hinges and duplication of hydraulic equipment to guard against catastrophic single point failures.

To make the aircraft more survivable, control surfaces were rearranged. In addition, an advanced, digitally controlled fly-by-wire system was included with software that isolates the damage and reconfigures the control system. Its three computers accept information from nose probes and numerous motion sensors. Among the latter is a modern, highly reliable set of laser gyroscopes. These are separated and rotated with respect to each other so they can survive if the aircraft is damaged in battle.

"Modification of the fighter design to include a self-repairing flight control system has shown that it is possible to further withstand damage and equipment failure," says Weinstein. "At the same time, the system decreases the flight control and hydraulic system cost and improves the plane's war-fighting capability."

Flight test plans are being developed to further explore and demonstrate the advantages of the system to future aircraft.■

Obituaries

Robert J. Brandi of Maintenance Routine, Bethpage, Corporate Services Division, died Jan. 13 at the age of 39. He had been with the company since 1976 and resided at 49 Elizabeth Dr., Bethpage, N.Y.

Frank A. D'Amato of Design Support, Melville, Aerostructures Division, died Dec. 13 at the age of 59. He had been with the company since 1966 and resided at 12 Lee St., Huntington, N.Y.

Paul Darby of Engraving, Bethpage, Aircraft Systems Division, died Jan. 1 at the age of 59. He had been with the company since 1953 and resided at 111-24 169th St., Jamaica, N.Y.

Brian T. Degan of Resources, Calverton, Aircraft Systems Division, died Jan. 10 at the age of 52. He had been with the company since 1960 and resided at 5 Butterfly Dr., Hauppauge, N.Y.

Chester E. Downing of Pricing and Analysis, Bethpage, Aircraft Systems Division, died Jan. 11 at the age of 65. He had been with the company since 1952 and resided at 162 Fairhaven Dr., Woodbury, N.Y.

Robert B. Englert of Preliminary Design, Bethpage, Aircraft Systems Division, died Dec. 12 at the age of 66. He had been with the company since 1951 and resided at 40 Hampton Blvd., Massapequa, N.Y.

Thomas G. Ennis of Maintenance Routine, Calverton, Corporate Services Division, died Jan. 13 at the age of 61. He had been with the company since 1974 and resided at Middle Island Blvd., Middle Island, N.Y.

Joseph R. Grohoski of A-6/EA-6B DITMCO/Fuel-DA, Calverton, Aircraft Systems Division, died Dec. 26 at the age of 33. He had been with the company since 1987 and resided at 1525 Haywaters Rd., Cutchogue, N.Y.

Baker Jameson of Air Traffic and Controls, Utica, Aircraft Systems Division, died Nov. 16 at the age of 48. He had been with the company since 1983 and resided at 8027 Thyme Circle, Liverpool, N.Y.

Charles L. McAllister of Support Engineering, Bethpage, Aircraft Systems Division, died Jan. 15 at the age of 22. He had been with the company since 1988 and resided at 7 Barclay Rd., Mastic Beach, N.Y.

Terrence J. Newitt of Field Operations, Bethpage, Aircraft Systems Division, died Dec. 10 at the age of 64. He had been with the company since 1949 and resided at 3737 Royal Pl., Bonita, California.

Jack M. Pedowicz of Computer Equipment, Bethpage, Aircraft Systems Division, died Dec.18 at the age of 64. He had been with the company since 1968 and resided at 24 Arista Dr., Dix Hills, N.Y.

James W. Press of Building Protection, Bethpage, Aircraft Systems Division, died Dec. 13 at the age of 58. He had been with the company since 1982 and resided at 20 Brixton Rd., Old Bethpage, N.Y.

Herschel C. Rooks of Vehicle Drafting, Bethpage, Aircraft Systems Division, died Nov. 28 at the age of 34. He had been with the company since 1985 and resided at 700 Broadway, Amityville, N.Y.

James D. Scott of Methods, Milledgeville, Aircraft Systems Division, died Dec. 1 at the age of 43. He had been with the company since 1976 and resided at 123 Lake Dr. N.W., Milledgeville, Georgia.

Retiree Obituaries

George H. Baker of 1016 Begonia Dr., Holiday, Florida, died Nov. 1, 1988. He retired in 1985.

William C. Bell of 23-15 Winding Path, Manorville, N.Y., died Nov. 4, 1988. He retired in 1978.

William P. Bonner of 8307 Arnoldtown Rd., Louisville, Kentucky, died Oct. 31, 1988. He retired in 1976.

Milton Butts of Middle Line Hwy., Sag Harbor, N.Y., died Oct. 20, 1988. He retired in 1971.

Henry E. Cajowski c/o Nancy Faltermayer of 5 Puget Sound Ct., Coram, N.Y., died Oct. 20, 1988. He retired in 1984.

Richard Celler of 369 Magnolia Rd., Selden, N.Y., died Oct. 24, 1988. He retired in 1972.

George J. Cleater at P.O. Box 1013, Miller Place, N.Y., died Nov. 3, 1988. He retired in 1974.

Angelo Galgano of 330 Greengrove Ave., Uniondale, N.Y., died Oct. 19, 1988. He retired in 1984.

Adolph S. Goldberg of 169 Ventry Ct. #B, Ridge, N.Y., died Aug. 27, 1988. He retired in 1976.

Ernest R. Hoene, Jr. of 1909 SE Fairfield St., Pt. St. Lucie, Florida, died Oct. 31, 1988. He retired in 1979.

John W. Jones of 5 Samaritan Rd., Albany, N.Y., died Oct. 31, 1988. He retired in 1965.

Ralph A. Lange of 8 Lambeth St., Holbrook, N.Y., died Oct. 26, 1988. He retired in 1982.

Henry A. Lartin of 29 Second St., Albany, N.Y., died Oct. 17, 1988. He retired in 1974.

Rene A. Legault of Northern Pines Park, RD #1 Lewis Rd., Ballston Spa, N.Y., died Nov. 8, 1988. He retired in 1983.

James E. Lundstrom of 1542 Old Hwy. #80, Space 34, Cojon, California, died Oct. 29, 1988. He retired in 1977.

Need Health Advice? Call Patient Advocate

The Patient Advocate program has logged about 19,000 calls from Grummanites since it was put into effect in 1987. It is a critical part of the Grumman/ Travelers group health insurance program.

Patient Advocate is a hospital utilization review program. Before any hospital admission and specified surgical procedures, the Travelers member must call Patient Advocate. You also must call within two working days of an emergency, urgent, or unscheduled admission, including maternity complications.

If Patient Advocate isn't notified, there is an extra deductible of $250 for non-compliance.

"In an emergency, anyone can make the call for you - such as a family member, co-worker, or friend," says senior insurance administrator Debra Walling. "It can even be done by a nurse or an admissions clerk. Managed care programs like Patient Advocate are quite common these days. It's quite possible that you'll be asked about it in the emergency room."

When you call, you are assigned one of the nine registered nurses associated with the Grumman program. They are familiar with the Grumman/Travelers plan and will tell you if a second opinion is required, the average length of stay in a hospital for your case, and the health care alternatives available.

The advocate can supply the names of doctors in your area who offer second opinions - a requirement of the plan for some surgical procedures. The advocate can also recognize cases when the need for surgery is clear and a second opinion is unnecessary.

"The Patient Advocate does not influence your decision to have surgery," says Walling. "The advocate just provides you with the information to make an informed choice."

The advocate can help in more mundane matters - providing you with forms to fill out and advice on post-operative care options. Advocates are also up to date on medical advances that translate to improved care at reduced costs.

Here are some answers to popular questions about Patient Advocate.

Where is Patient Advocate, anyway? Is this 800 number a dedicated line, or is this a group handling the whole Eastern Seaboard? What if I get a busy signal?

The Patient Advocate office is near Hartford, Connecticut. It is staffed by about 100 people, nine of whom deal solely with Grummanites. If you do call, and these advocates are handling another caller, you may leave a message with the receptionist and an advocate will call you back promptly.

How does the advocate determine how long I can stay in the hospital?

The advocate bases this determination on both insurance industry guidelines as well as conferring with your doctor. Remember, too, that you decide what's best for you. The advocate's role is merely to advise you.

Can I be assured of confidentiality?

Yes. The patient advocates are subject to the same confidentiality rules as the people who handle your claims.

If I don't like what he/she has to say, and don't heed the advice, will it go on record somewhere and come back to haunt me?

No. The role of the advocate is to help you make informed choices about health care.

Toll-free Number

Grummanites nationwide can call the program on a toll-free number — 1-800-521-0157) — Monday through Friday, 8 a.m. to 6:45 p.m., Eastern Standard Time.

Is Your Dependent Still Insured?

A dependent who is not a full-time student is covered by Grumman health insurance only until the February 1 after his or her 19th birthday.

The full-time student is covered until the February 1 following his or her 24th birthday or upon graduation, whichever comes first. If your dependent's insurance is terminated for one of these reasons, you have 60 days to apply for continuation of group health benefits. The beneficiary must pay the appropriate premiums.

You can get an application by calling the Corporate Benefits Department at (516) 575-3044.

He's Got It Covered. *Vincent Feola's Project Sterling suggestion was to place acetate covers on hardware bins to prevent the parts from getting mixed up. His suggestion saved the company over $77,000 last year.*

Feola Keeps A Lid On Hardware Costs

"Sometimes you have to think simple to come up with a smart idea," says Aircraft Systems' Vincent Feola.

Feola is one of the top 1988 Project Sterling winners. He came up with the idea of placing clear acetate covers on hardware bins to prevent mixing of different types of hardware.

His idea saved the company $77,300 last year simply by eliminating the huge number of hours spent sorting the hardware. For his suggestion, Feola was awarded 181 shares of Grumman stock, valued at $4,118.

"It sounds like a very obvious solution," says Feola. "But sometimes the obvious is the last thought of."

Feola, a Grummanite for more than 16 years, now works in Production Control in Bethpage's Building 1. His job is to make sure that all the hardware needed to assemble the aircraft is available at the various hardware storage stations.

Before Feola's suggestion was implemented, mechanics would reach into the hardware bins and grab however many nuts, bolts or other parts they needed. The bins are actually drawers with twenty or so separate compartments. If the mechanic accidentally dropped some of the parts, the hardware would land in the wrong compartment. "Also," adds Feola, "if a mechanic slammed the drawer a little too hard, the parts would sometimes slip down the back of the drawer and into other compartments."

"The problem of mixed hardware is a serious one," explains Feola. "Some of the parts look exactly the same but are much different. One may hold quite a bit more weight than the other. Using the wrong bolt could be disastrous to an aircraft."

Feola suggested using acetate already in stock, cutting it to fit the compartment opening, and attaching it with electrical tape. "Now if a part is dropped, it lands on top of the cover and is easily spotted," says Feola.

Al Card, a leadman in E-2C Subassembly in Building 1, says Feola's suggestion will not only save him an enormous amount of time, but a lot of energy as well. "I would reach into a bin and grab a handful of hardware," explains Card. "By the time I walked over to the aircraft and looked in my hand, I'd discover I had maybe two of the right parts. The rest were from other compartments."

In 1988, more than 1,600 Grummanites submitted over 2,190 suggestions. "If you look around and really pay attention to what goes on around you every day, you'll find there are lots of ways to make things better," says Feola. "Besides, you can't beat the awards."

Appointments

The following Grummanites recently received new assignments:

Aircraft Systems

Integrated Logistics Support: Lawrence Wicklund, project leader, Digital Test; Thomas Oliveri, project engineer, Computer Engineering; John Allsopp, section head, RF/Analog/ Product Test; Walter Fruth, section head, Digital Test; Mark Bradbard, section head, Software Development; Silvio Castignoli, group head, RF/Video Test; James Elliott, group head, Analog Test; Henry R. Riehl, group head, Product Test; Peter Eckstein, group head, Sub-Systems Test; George Keane, group head, Sub-Assembly Test; Joseph Burkowsky, group head, Software Engineering; Wilber Holmer, technical specialist, RF/ Analog/Product Test.

J. J. Antonucci

P. Augerbright

D. Bauer

A. J. Ceraso

L. Crites

F. H. Crouch

R. Damarodas

F. De Maio

Service Milestones

40

James W. Byrne, Bethpage, Corporate Services
Arthur J. Falbush Jr., Bethpage, Aircraft Systems
Richard P. Feyk, Melville, Aircraft Systems
Robert H. Grosser, Bethpage, Corporate Services
Alfred Q. Kuntz, Bethpage, Aircraft Systems
Edward Mulcahy Jr., Bethpage, Aircraft Systems
Anthony A. Mule, Bethpage, Aircraft Systems
Eugene J. Prime, Bethpage, Aircraft Systems

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Joseph A. Belisle, Bethpage, Space Systems
Joseph J. Cavalluzzi, Bethpage, Aircraft Systems
Michael D. D'Agostino, Bethpage, Corporate Services
Leonard W. Keer, Melville, Aircraft Systems
James E. Peters, Calverton, Aircraft Systems
Charles E. Rak, Bethpage, Aircraft Systems
William J. Rigby, Bethpage, Space Systems
Ernest Steiger III, Calverton, Aircraft Systems

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David O. Averette, Calverton, Aircraft Systems
Frank Bartlett, Bethpage, Aircraft Systems
Edmund A. Borgo Jr., Melville, Aircraft Systems
Kathleen T. Chew, Bethpage, Corporate Services
Joseph Childs, Melville, Melbourne Systems
Robert P. Darling, Bethpage, Aircraft Systems
Ronald F. Davies, Bethpage, Technical Services
Arthur L. Deissler, Bethpage, Aircraft Systems
Arthur R. Deller, Bethpage, Aircraft Systems
Thomas Economon, Bethpage, Aircraft Systems
John E. Elflein, Bethpage, Aircraft Systems
Theodore Faller, Bethpage, Grumman Corporation
Zigfrid R. Grins, Bethpage, Aircraft Systems
Hubert R. Grinsell, Melville, Aircraft Systems
Wesley A. Haines Jr., Hicksville, Aircraft Systems
Henry J. Hinrichs, Bethpage, Corporate Services
Richard L. Hunecke, Stuart, Aircraft Systems
George A. Jamros, Calverton, Aircraft Systems
Floyd J. Johnson Jr., Bethpage, Aircraft Systems
Robert L. Kennedy, Bethpage, Aircraft Systems
James P. Kennedy, Bethpage, Aircraft Systems
Alfred Kuhn, Melville, Aircraft Systems
Jack LaCara, Bethpage, Aircraft Systems
Rolf J. Larson, Bethpage, Grumman International
Gloria Lindergren, Bethpage, Corporate Services
James Livreri, Bethpage, Corporate Services
Leon Maggio, Bethpage, Corporate Services
Frederick R. Mazzitelli, Bethpage, Corporate Services
John E. McNamara, Calverton, Aircraft Systems
David E. Mohlenbrok, Melbourne, Melbourne Systems
Thomas F. Molloy, Bethpage, Corporate Services
Stanley Nilsen, Calverton, Aircraft Systems
Steve Olish, Bethpage, Aircraft Systems
Arthur J. Pugliese, Calverton, Aircraft Systems
Lewis J. Scheuer, Bethpage, Corporate Services
Herbert S. Siegel, Melville, Aircraft Systems
Domenico Stanzione, Bethpage, Corporate Services
John C. Stark, Melville, Aircraft Systems
William E. Sweeney, Melville, Aircraft Systems
Josephine Tornatore, Woodbury, Data Systems
Barbara A. Trapani, Bethpage, Aircraft Systems
Frederic J. Trinkle, Melville, Aircraft Systems
Paul N. Turtzo, Melville, Aircraft Systems
Robert J. Wheeler, Calverton, Aircraft Systems
Laurette Williams, Hicksville, Corporate Services
Herman G. Young, Bethpage, Corporate Services
David Yuhas, Reston, Space Station Support

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Jerome J. Antonucci, Bethpage, Corporate Services
Paul Augerbright, Sturgis, Allied
Daniel Bauer, Bethpage, Aircraft Systems
Richard Beechy, Sturgis, Allied
Daniel K. Broderick, Bethpage, Aircraft Systems
Stephen T. Campbell, Bethpage, Aircraft Systems
Antonio J. Ceraso, Calverton, Aircraft Systems
Larry Crites, Sturgis, Allied
Florence H. Crouch, Calverton, Aircraft Systems
Robert Damarodas, Melville, Aircraft Systems
Frank DeMaio, Bethpage, Aircraft Systems
Leon D. Dixon, Bethpage, Aircraft Systems
James C. Eckert, Melville, Aircraft Systems
Fred Edelstein, Bethpage, Space Systems
Robert E. Foster, Bethpage, Corporate Services
Gail L. Hall, Bethpage, Grumman Corporation
Melvin R. Hennen, Great River, Electronics Systems
Gerald L. Hollowell, Bethpage, Space Systems
Robert F. Jarvis, Bethpage, Aircraft Systems
Charles F. Johnson, Hicksville, Aircraft Systems
J. T. Kelly, Bethpage, Data Systems
Donald E. Lesmes, Hicksville, Aircraft Systems
Eugene R. Marquardt, Bethpage, Aircraft Systems
Marilyn Moldovan, Bethpage, Corporate Services
Gerald B. Navratil, Calverton, Aircraft Systems
Wilfred T. Oakley, Bethpage, Aircraft Systems
Roy E. Olsen, Bethpage, Space Systems
Thomas D. Pace, Bethpage, Aircraft Systems
Alan T. Pastore, Melville, Aircraft Systems
Walter P. Roell, Bethpage, Aircraft Systems
Edward M. Samson, Bethpage, Aircraft Systems

J. C. Eckert

F. Edelstein

R. E. Foster

G. L. Hall

M. R. Hennen

G. L. Hollowell

R. F. Jarvis

C. F. Johnson

J. T. Kelly

E. R. Marquardt

M. Moldovan

G. B. Navratil

R. E. Olsen

T. D. Pace

A. T. Pastore

E. M. Samson

R. F. Schantz

R. C. Scholl

R. Shipman

G. R. Stoodley

Richard F. Schantz, Bethpage, Corporate Services
Robert C. Scholl, Bethpage, Aircraft Systems
Richard Shipman, Marathon, Allied
Gerald R. Stoodley, Bethpage, Aircraft Systems
Richard S. Traube, Bethpage, Aircraft Systems
Emil R. VandenBosch, Fleetville, Electronics Systems

R. S. Traube

E. R. Vanden Bosch

Smokers Invited To Kick The Habit In 1989

Okay, it's a new year and you want to quit smoking. The Grumman Medical Department is sponsoring a Smoking Cessation Workshop in mid-March. The workshop will meet twice a week for two weeks from 4:30 to 5:30 p.m. in corporate headquarters. Grummanite David Marsden is the facilitator; he is an American Cancer Society volunteer. The workshop costs $25; bring checks payable to the American Cancer Society to the first session. Space is limited; first come, first served. Call Ada Colter, coordinator of Nursing Services, 575-3723, to register.

CPR Classes Set For '89

Grumman Medical is once again sponsoring cardio-pulmonary resuscitation (CPR) courses, starting March 13, at several Long Island locations.

The three-hour CPR class will be held on Mondays from 4:30 to 7:30 p.m. at the following locations: Bethpage, March 13, 20 and 27; Melville, April 3; Woodbury, April 10; Holtsville, April 17; Great River, April 24, and Calverton, May 8. The class costs $15.

This course will cover the signs and symptoms of a heart attack, overview of the anatomy and physiology, and demonstration of the CPR techniques.

After the students pass a written test in CPR and demonstrate the method correctly, they will be certified by the American Heart Association in the Heartsaver Program.

If you are interested in attending a CPR class, fill out the form on this page and mail it to Ada Colter, C08-GHQ. Class size is limited. Students must bring a $15 check payable to the American Heart Association to the class.

CPR Class Registration Form

Name.....

Badge No.....

Mail Stop.....

Phone Number.....

I'd like to sign up for the following class:

Bethpage:
[ ] March 13
[ ] March 20
[ ] March 27

[ ] **Melville**: April 3
[ ] **Woodbury**: April 10
[ ] **Holtsville**: April 17
[ ] **Great River**: April 24

[ ] **Calverton**: May 8

Mail to: Ada Colter, A08-GHQ

Readership Survey

We don't want to do all the talking. We'd like to know what you think about the things you see in these pages. Your comments, suggestions and complaints are welcomed. Please take a few minutes and give us your opinions.

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Mail to: Grumman World, A22-GHQ
1111 Stewart Ave., Bethpage, N.Y. 11714

Security: Take Extra Care When Traveling Abroad

In light of recent international events, the Corporate Security Department is urging Grummanites to be extra careful when traveling abroad. This rule applies whether travel is business-related or personal.

Corporate Security's recommendations are based on information from a consulting firm that advises Fortune 500 companies on how to protect employees who travel abroad.

The traveler should avoid U.S. and other substantial and high risk carriers from Third World embarkation points, including Latin America. To the extent possible, the traveler should also avoid using such carriers from developed nations in Western Europe and Eastern Asia.

The following foreign airlines have been classified currently as high risk by Grumman's consultant: Air India, Alitalia, Egyptair, El Al, Iraqi Airways, Japan Air Lines, Korean Airlines, Kuwait Airways, Middle East Airlines, Pakistan International, Royal Jordanian, and Swissair.

Classified as "substantial risk" are: Austrian Airlines, British Airways, British Caledonian, Gulf Air, Lufthansa, Saudi Arabian, South African Airways, and Turkish Airlines.

In the "moderate risk" category are: Air Afrique, Air Canada, Air France, Canadian Airlines, Iberia, KLM, Olympic Airways, and UTA. The low-risk foreign carriers include: Cathay Pacific, Sabena, SAS, Singapore Airlines, TAP Air Portugal, Thai Airways International, and Qantas.

If it is impossible to avoid substantial and high-risk carriers, travelers should select nonstop flights originating at their point of embarkation. Continuing flights afford terrorists the opportunity to plant a bomb and disembark.

"We continue to regard flights from U.S. and Canadian cities as relatively safe, since Palestinian terrorists have yet to demonstrate the capability to mount attacks of any sort in North America," says Harry Volz, director of Corporate Security and Transportation.

F-14 Tomcat Returns To Airwaves In February

In late February, on cable television's Discovery Channel, F-14 fans can catch an hour-long show featuring the Grumman Tomcat. The show is just one of the 13 episodes of Great Planes, which chronicles the history and development of U.S. warplanes.

The F-14 show will air on Wednesday, February 22, 9 to 10 p.m.; Friday, February 24, 4 to 5 p.m.; and Saturday, February 25, 1 to 2 p.m. All times are eastern.

Check your cable television guide for other shows in the Great Planes series.

A Return Engagement. *The Grumman F-14 Tomcat returns to cable television's Discovery Channel next month. The F-14 episode was one of six in the Great Planes series which debuted last summer. Seven new episodes will also air.*